

Patent Claims

Transmitter comprising

- a set of equally constructed sensors (1, 21, 23) for measuring a physical variable,
- a set of electronic circuits (5),
  - each of which is associated with a sensor (1),
  - which serve to condition an electric signal, generated by the associated sensor and corresponding to the physical variable, and
- an output unit (17, 27),
  - to which the conditioned electric signals of all sensors (1) are supplied,
  - which produces a measurement signal from the conditioned electric signals and makes it available for further evaluation, processing, and/or display, and
  - which produces a statement concerning the plausibility of the measurement signal and/or a statement concerning the functional capability of individual sensors (1).

2. Transmitter as claimed in claim 1, wherein the measurement signal is an average value derived from the electric signals, particularly a median or an arithmetic mean.

3. Transmitter as claimed in claim 1, wherein the measurement signal is derived from the electric signals, and wherein those signals that deviate from the remaining signals by more than a predetermined amount are not considered.

4. Transmitter as claimed in claim 1, wherein the sensors (1) are pressure sensors, and a temperature sensor (19) is associated with each set of one or more neighboring sensors.

5. Transmitter as claimed in claim 4, wherein the temperature sensors (19) serve for a compensation of a temperature-dependent measurement-error.

6. Transmitter as claimed in claim 4, wherein the evaluation unit (17) serves for determining a plausibility of temperature-dependent signals produced by the temperature sensors (19).

7. Transmitter as claimed in claim 1, wherein the sensors (1) are pressure sensors and, for measuring a pressure-difference between a first pressure (p1) and a second pressure (p2), a first set of sensors (23) is provided for registering the first pressure (p1) and a second set of sensors (25) is provided for registering the second pressure (p2), and the output unit (27) calculates the difference between the first pressure (p1) and the second pressure (p2).

8. Transmitter as claimed in claim 1, wherein the sensors (1) are sensors produced in a batch process and arranged on a base plate (3).

9. Transmitter as claimed in claim 8, wherein the electronic circuits (5, 21) are arranged on the base plate (3).

10. Transmitter as claimed in claim 1, wherein the transmitter issues a warning, if the functionality of a sensor falls short of a predetermined minimum functionality.

11. Transmitter as claimed in claim 1, wherein the transmitter issues an alarm, if plausibility and/or functionality fall short of a predetermined minimum.